Geography 9th 2020

1. INDIA-SIZE AND LOCATION

Q 1: **Choose the right answer from the four alternatives given below**.

(i) The Tropic of Cancer does not pass through

Ans. Odhisa

(ii) The easternmost longitude of India is

Ans. **(a)** 97° 25' E

(iii) Uttarakhand, Uttar Pradesh, Bihar, West Bengal and Sikkim have common frontiers with

Ans . (c) Nepal

(iv) If you intend to visit Kavaratti during your summer vacations, which one of the following Union Territories of India you will be going to?

Ans. (b) Lakshadweep

(v) My friend hails from a country which does not share land boundary with India. Identify the country.

Ans .(b) Tajikistan

Q2: ***Answer the following questions briefly.***

(i) Name the group of islands lying in the Arabian Sea.

Ans: Lakshadweep Islands lie in the Arabian Sea.

(ii) Name the countries which are larger than India.

Ans: Russia, Canada, USA, China, Brazil and Australia are the countries that are larger than India.

(iii) **Which island group of India lies to its south-east?**

Ans: Andaman and Nicobar Islands lie to the south-east of India.

(iv) **Which island countries are our southern neighbours?**

Ans: Sri Lanka and Maldives are the two island countries that are the southern neighbours of India.

Q3. The sun rises two hours earlier in eastern parts of Arunachal Pradesh as compared to Gujarat in the west but the watches show the same time. How does this happen?

Ans. The earth takes 24 hours to complete one rotation (360˚) about its axis. It means the earth rotates at the pace of 15˚ per hour (360˚/ 24). As the longitudinal extent of India is about 30˚ longitude, the time lag between Easternmost (Arunachal Pradesh) and Westernmost (Gujarat) points of India is of two hours. It happens owing to longitudinal and latitudinal location's influence.

Q 4: The central location of India at the head of the Indian Ocean is considered of great significance. Why?

Ans. The Indian landmass is centrally located between east and west Asia. The part that is attached to the Asian continent connects India (through land routes and mountain passes) to the various countries lying to its north, west and east. The part that protrudes into the Indian Ocean connects India (through the trans Indian Ocean routes) to Europe, west Asia and Africa in the west and the countries of east Asia. The strategic location of India has contributed to the exchange of ideas and commodities, through land and sea, since ancient times. This is the reason why its location at the head of the Indian Ocean is significant.

9TH GEOGRAPHY

GEOGRAPHY OF JAMMU & KASHMIR AND LADAKH

PHYSIOGRAPHY (PHYSICAL DIVISIONS):

The Union territories of Jammu and Kashmir constitutes northern most extremity of India and is situated between 32 °17′ to 36°58′ north latitude and 37°26′ to 80° 30′ east longitude. It falls in the great northwestern complex of the Himalayan Ranges with marked relief variation, snowcapped summits, antecedent drainage, complex geological structure and rich temperate flora and fauna.

The Union territories of Jammu & Kashmir and Ladakh are surrounded by the neighbouring countries of China(Tibet) in east, Afghanistan in north and Pakistan in west. The states of Punjab and Himachal Pradesh form the southern border of the union territories.

The UT of Jammu and Kashmir and UT of Ladakh possesses a peculiar geo-physical setting as all the major landforms i.e. mountains, plateaus, plains and valleys are present in its landscape.

The main physical divisions of UT of Jammu & Kashmir and UT of Ladakh are as follows:

1. The Outer plains.
2. The Shiwaliks
3. The Middle Himalayas.
4. The Valley of Kashmir
5. The Ladakh region

1. **THE OUTER PLAINS:** The outer plain also known as Andarwah and Bajwat is a part of Great Plains of India. Its width varies from 5-25 kilometers and it stretches from river Ravi to River Chenab for an extension of 110 kilometers with the elevation of 330 to 360 meters. The narrow zone of plains in the Jammu region is alluvial in nature. Besides Ravi and Chenab the region is also drained by Ujh, Basantar, Tawi and Manawar Tawi. This plain is badly dissected by a series of deep and shallow ravines which carry off the seasonal flood waters of monsoon rains. Such is the number of ravines that there are 200 bridges on the Jammu railway line which passes through this region. The mountains of Jammu almost run parallel to the outer plain region. Rainfall is low, amounting to about 15 to 20 inches (380 to 500 millimeters) a year, and it occurs mainly in the form of heavy but infrequent rain showers in the summer (June to September) when the monsoon winds blow. These plains are highly fertile owing to the favorable climatic conditions and assured irrigation which enables the cultivation of crops throughout the year. Jammu, Kathua, Samba, Hiranagar and Akhnoor belong to the outer plains. The countryside has been almost entirely denuded of trees, and thorn scrub and coarse grass are the dominant forms of vegetation. At higher elevations the topography changes and the hill slopes appear wooded.

2. **THE SHIWALIKS:** The outermost relatively low hills of the Himalayas along its whole length from the Indus to the Brahmaputra are known as the Siwaliks. The width is between 20-50 kms and the altitude ranges between 600 -1200 meters in the state. A series of wide longitudinal

valleys called dunes lie to the north of Siwalik hills. Udhumpur, Sunderbani, Bosahli, Ramkot and Dansal are typical examples of such dunes. The slope facing the outer plains is gentle covered with deciduous forests while the northern slopes are steep with dense vegetation. Due to the presence of ravines, the Siwaliks appear as isolated and broken hills. Rainfall increases with elevation, and the lower scrubland gives way to pine forests at higher altitudes. The undulating slope adjacent to the plains up to an elevation of 300 m between Ravi and Chenab rivers is locally known as Kandi Characterized by numerous torrents, hilly soils and scarcity of water. Xerophytic vegetation is common in these areas while agriculture is subjected to the availability of rainfall. Lake Mansar and Sarunsar are situated at an elevation of 600 meters to the east of Jammu city in the Siwalik hills. The important towns are Jasrota, Samba and Akhnoor.

3. **THE MIDDLE HIMALAYAS:** The middle Himalayas are also known as the middle mountains, lesser Himalayas or Pir Panjal. They have an east-west extension. They vary in elevation between 1800 m to 3600 m with a width of about 60 kms in the eastern part of Jammu division and 10 kms near Rajouri. This physical division lies between the Ravi in the east and the Poonch in the west and continues up to Muzafarabad. They are locally known as Pahar (mountain) in Jammu region. Several important rivers like Tawi, Manawar Tawi, Basantra and Ujh have their sources in middle Himalayas. However, Chenab is an important river of this region and the famous Salal Hydroelectric project near Reasi is constructed on it. The middle Himalayas are dotted by small valleys. Trikuta mountains

with the famous cave of Vaisho Devi is located in middle Himalayas. This area is very rich in forest resources. The Jammu –Srinagar National Highway(293kms) has been carved out through the mid-himalayas. IRCON has started to lay a railway tract from Udhampur to Qazigund through these mountains. Bhaderwah and Kishtwar are the famous valleys of this region.

4. **THE VALLEY OF KASHMIR:** The Valley of Kashmir, nestled in north-**western** folds of the Himalayas is a transverse valley, surrounded on all sides by high mountain ranges, characterized by snow covered lofty peaks.The valley of Kashmir is encompasses by Greater Himalayas in the north and middle Himalayas in South. The width of the valley varies between 40 – 60 kms and its length is approximately between 130-1800km above mean sea level.The valley of Kashmir is futher divided into:

(i) The Valley Floor

(ii) The Karewas

(iii) The Side Valleys

(i)The Valley Floor: the flood plains of Jhelum sprawls from Khanabal in the South-East up to the district Baramulla in North –West. It is fertile agricultural tract of immense importance and is considered as the "food bowl" of the valley.

(ii)The Karewas: The Karewas are lacustrine deposits and are the unique features of Kashmir Valley. Karewas are flat topped features ideal for saffron cultivation. The Karewas are flanked on one side by mountains

while on the other, their gentle slopes touch the ground level or the valley floor.

(iii)The side Valley: Side valleys like Sindh, Narang, Lidderand Daksum are important centres of tourist attraction and livestock rearing. The Kishenganga Valley in Gurez is one of the famous side valleys of the region.

***Liddar Valley:** The Liddar Valley extends from Anantnag (Islamabad) to Pahalgam, including the Parganas of Dachinpora and Khaurpora. At Pahalgam, the valley divides itself into two branches which stretch obliquely, one towards the north-east, leading up to the Sheshnag and the Cave of Amarnath. At its lower end the valley is about 5 to 8 km wide but at its upper end it is only a few hundred metres in width.On both sides, it is bounded by lofty mountains covered with dense forests. Cultivation of crops does not extend beyond about a mile north of Pahalgam. There is a road along the left bank of the river upto the Amarnath Caves. This path is yearly traversed by lakhs of Hindu pilgrims, in the months of July and August.The river Liddar is fed with streams from the Kolahai and Sheshnag. Towards Kolahai is a small valley covered with grasses where glades are used by graziers. The steep sides of this valley show marred ice action with several waterfalls till the Kolahai glacier at an altitude of about 5470 m (17,779 feet).

*** Sind Valley:**

It is one of the most beautiful valleys of Kashmir. It owes its name to the river Sind-Lar which is fed by glaciers and streams. It extends from Ganderbal to the Zoji-La Pass, covering a distance of about 100 km.

Sonamarg (golden meadow) is a beautiful meadow near the Thajwas Glacier.The Sind valley widens after Shadipur. On either side of the valley are the lovely snow covered peaks. The valley abounds in large forests of pine, and other fruit trees. The famous lakes of Vishansar, Krishnsar and Gangabal are within the catchment of Sind River which attract large number of tourists every year.

*** Lolab Valley:**

This fertile oval shaped valley is situated in the north-west side of Kashmir; it is about 25 km long and 5 km wide. It is traversed by the Lahwal Stream which flows down from the surrounding hills. The valley is covered by thick forest of deodar. The extensive pasture lands in the valley are the excellent grazing grounds. It is also famous for apple, cherry, peach and walnut.

6. **THE LADAKH REGION:** The Ladakh region(Plateau of Ladakh) constitutes the northernmost region of India.It is the loftiest inhabited region of the world. It is a Vast Arid table land located at a height of 5000 metres. Most of the surface area of Ladakh is mountainous and uninhabited as it comprises of old deserts and desolate plateaus intervened by difficult passes and valleys. The region is sparsely populated and people live traditional life, herding sheep and yak and growing barley near the river beds in summer. The mighty river Indus flows right through Ladakh. Leh is famous for its adventure sports. The region is famous for the Leh Palace and the Namgyal Tsemo Gompa monastery. The glacier of Siachen, about 72km in length on Karakoram range of Himalayas is situated in this region.The Ladakh region comprises of the following ranges:

(i) Zanskar Range

(ii) The Ladakh Range

(iii) The Karakoram Range

(iv) The Aksai Chin Region

(v) Gilgit and Batlistan

(i)The Zanskar Range: This range forms the southern flanks of Sindh valley and is drained by Zanskar River. This range of famous for its two river valleys i.e. the Zanskar valley and Sooru valley. The area is very cold. Drass, the world's second most coldest place is also found in this region.

ii) The Ladakh Range: This range is situated between the Indus and the Shyok rivers. It forms a prominent range in the Trans Himalayan region. It stretches from the Indus bend sharply and cuts through it separating it from Zanskar range in Rushpu.

iii) The Karakoram Range: It extends from the river Hunza in the northwest to the River Shyok in the east. Almost the entire crest line is covered with perpetual snow with number of giant glaciers crawling slowly down the slope. It may, therefore aptly be called as the shinning crest of the earth.

iv) The Aksai Chin Region: The Aksai Chin region situated in the north eastern portion of Ladakh, east of river Shyok is also known as Lingtze Tang Plain

v) Gilgit and Baltistan: Geographically, Gilgit and Baltistan are situated in the Trans Himalayan region on the north western corridor of Kashmir valley. It

is highly mountainous region.This region is drained by river Indus, Gilgit, Hunja, Shyok and other tributaries.

CLIMATE

The climate of the Union Territory of Jammu & Kashmir and the Union Territory of Ladakh can be divided into the following climatic zones:-

(i) Sub Tropical Jammu

(ii) Temperate Kashmir

(iii) Arctic Ladakh, Gilgit and Baltistan

JAMMU DIVISION: The highland areas experience temperate climate due to high altitude in the area of Bhaderwah, Kishtwar, Bani, Basohli, Gool, Gulabgarh, Poonch, parts of Rajouri and Banihal; whereas the rest of Jammu Division experiences a sub-tropical type of climate as being close to the plains of Punjab. Jammu has tropical heat characterized with monsoon rains and cool winters.The mean monthly temperature in Jammu city reaches well above 20 degrees Celsius. June the hottest month recording a mean monthly temperature of about 31.6 °C. The dry and hot wind often blows in the afternoon during summer season and the wind locally known as Loo. January is the coldest month in the plains of Jammu in which average monthly temperature reach around 13°C. The occurrence of frost fog and mist is quite frequent in the morning hours of winter season.The month of July and August are the wettest months recording an average monthly rainfall of about 275 and 250 mm respectively.

TEMPERATE KASHMIR: The valley of Kashmir along with some hilly areas of Jammu experience temperate climate. The distinctive features of climate of Kashmir are

* Mild summers,

*Vigorous and severe winters with snow and rain,

*A muggy and oppressive weather in July & August.

*The most pleasant spring.

July is the hottest month in which maximum temperature may shoot upto 35°C. January is the coldest month which is locally known as period of Chille-e-Kalan(40 days of intense cold.) Kashmir receives moderate rainfall which mostly occurs during winter months and summer usually remains dry due to absence of monsoon.

ARCTIC LADAKH: Ladakh experiences a very cold and very dry climate. A cold desert condition prevails in this region. The climate is often characterized by great extremes of heat and cold, with excessive dryness. Ladakh receives a little amount of precipitation throughout the year. Precipitation is mainly in the form of snow. There prevails a great difference in sun and shade temperature in Ladakh region. Summers are short and oppressive and winters are long and extremely cold. January is the coldest month in Ladakh.

DRAINAGE SYSTEM OF JAMMU KASHMIR AND LADAKH:

The Union Territories of Jammu & Kashmir and Ladakh are drained by the mighty Indus river system and its tributaries. The valley of Kashmir is drained

by Jhelum, Kishenganga rivers and their tributaries. The Jhelum (Vyeth in Kashmiri and Vitasta in Sanskrit) is the main waterway of valley of Kashmir. It rises from a spring called Verinag in Pir Panjal range. It flows to a distance of about 25kms upto Khanabal like a nallah and then joined by various tributaries like Sandran, the Bringa, Vishew the Kokernag and the Achabal streams. River Lidder is also one of the important tributary of the river in Jhelum. The capital city of Srinagar is situated on the banks of river Jhelum. At Baramulla, it enters through a gorge and leaves the territory of India and enters Pakistan.

The Jammu region is mostly drained by river Chenab, Ravi, Tawi and their tributaries. The river Chenab is formed of two main streams-The Chandra and The Bhaga. They rise in Lahul (HP) and is called Chanderbhaga before entering the territory of J&K .It enters Jammu and Kashmir through Padder region in Kishtwar. The total length of Chenab in J&K is about 118kns. Its basin sprawls over an area of about 26,755 Sq kms. It drains the districts of Kishtwar, Doda, Ramban, Reasi and Jammu. Important power projects of Salal Hydel Project (345MW) and Dulhasti (390MW) are generating electricity through the waters of river Chenab in Reasi and Kishtwar areas respectively

The Union Territory of Ladakh is mainly drained by Indus River and its tributaries. Zanskar, Suru and Shyok are important tributaries in eastern Ladakh where as Gilgit, Hunza, Gomal are important tributaries of this river in Gilgit Baltistan area.

SOIL:

The Union Territories of Jammu & Kashmir and Ladakh are blessed with varied soil groups. River valleys are dominant with alluvial soils, brown

forest soil and mountainous soil are also found in different regions. Major soil groups are:.

1. **Alluvial Soil:** The Jammu plains are predominantly covered with alluvial soil. In Jammu region the alluvial soils have two variants

(i) Old alluvium (Bhangar): lie above the banks of the river and are generally free from floods

ii) New alluvium (Khaddar): are frequently inundated as they lie in the flood plains of rivers

2. **Karewas Soil:** Karewas are lacustrine deposits found as low flat mounds or elevated plateaus in the valley of Kashmir and Kishtwar and Bhaderwah tracts of Jammu Division. Karewas soils are coarse in the flanks of Jhelum and finer towards the central part. Due to the presence of proper irrigation facilities, this soil is highly productive for horticulture crops especially apple almond and saffron.

Ladakh region being a cold desert lacks well developed soil profile. However, some alluvial tracks are found on the banks of Sindh River and its tributaries. Mountainous soil are predominantly seen in various areas of Ladakh region.

TEXT BOOK QUESTIONS

Q Answer the following questions:-

i) Explain the major physical divisions of Jammu, Kashmir and Ladakh?

Ans: Refer to the topic Physiography(Physical Divisions) above.

ii) Name the areas of Jammu Division which are covered by the alluvial plains?

Ans. The areas of Jammu Division which are covered by the alluvial plains include the southern parts of Akhnoor, Jammu, Ranbir Singh Pura (R.S Pura), Bishnah, Samba, Hiranagar and Kathua.

iii) Discuss the main features of climate of Ladakh?

Ans. Ladakh experiences a very cold and very dry climate. A cold desert condition prevails in this region. The climate is often characterized by great extremes of heat and cold, with excessive dryness. Ladakh receives a little amount of precipitation throughout the year. Precipitation is mainly in the form of snow. There prevails a great difference in sun and shade temperature in Ladakh region. Summers are short and oppressive and winters are long and extremely cold. January is the coldest month in Ladakh.

iv) Name the main tributaries of River Jhelum?

Ans Romushi, Doodh Ganga, Sukhnag. Lidder. Sindh Nallah, Madhumati and Phuru are important tributaries of Jehlum.

v)Which mountain ranges of Himalayas surround the valley of Kashmir?

Ans. The valley is bounded on the southwest by the Pir Panjal Range and on the northeast by the main Himalayas range.

vi) Name the main rivers and tributaries which flow through the outer plains of Jammu?

Ans:The main rivers of Jammu region are Chenab, Tawi and Ravi . The Basantar, Ujh, Manawar Tawi are the main tributaries which flow through the outer plains of Jammu.

vii) Give a brief account of the soils found in Jammu, Kashmir and Ladakh?

Ans: The Union Territories of Jammu & Kashmir and Ladakh are blessed with varied soil groups. . Major soil groups are:.

1. Alluvial Soil: The Jammu plains are predominantly covered with alluvial soil. In Jammu region the alluvial soils have two variants .Old alluvium (Bhangar) which lie above the banks of the river and are generally free from floods
   and New alluvium (Khaddar) which are frequently inundated as they lie in the flood plains of rivers

2. Karewas Soil: Karewas are lacustrine deposits found as low flat mounds or elevated plateaus in the valley of Kashmir and Kishtwar and Bhaderwah tracts of Jammu Division. Karewas soils are coarse in the flanks of Jhelum and finer towards the central part. Due to the presence of proper irrigation

facilities, this soil is highly productive for horticulture crops especially apple almond and saffron.

Ladakh region being a cold desert, lacks well developed soil profile. However, some alluvial tracks are found on the banks of Sindh river and its tributaries. Mountainous soil are predominantly seen in various areas of Ladakh region.

Q.Write short notes on:

a) **Alluvial soil:** Alluvial soil is the soil deposited by surface water. The Jammu plains are predominantly covered with alluvial soil. In Jammu region the alluvial soils have two variants .Old alluvium (Bhangar) which lie above the banks of the river and are generally free from floods and New alluvium (Khaddar) are frequently inundated as they lie in the flood plains of rivers.

b) **Side Valleys:** The term "side valley" is used for higher order valleys near mountains, as opposed to lower valleys that do not have a strong relief.The famous side valleys of the Kashmir region are Lider valley, Sindh valley, Lolab valley and Kishanganga valley.

c) **Plateau of Ladakh:** The Ladakh region(Plateau of Ladakh) constitutes the northernmost region of India.It is the loftiest inhabited region of the world. It is a Vast Arid table land located at a height of 5000 metres. Most of the surface area of Ladakh is mountainous and uninhabited as it comprises of old deserts and desolate plateaus intervened by difficult passes and valleys. The region is sparsely populated and people live traditional life, herding sheep and yak and growing barley near the river beds in summer. The mighty river

Indus flows right through Ladakh. Leh is famous for its adventure sports. The region is famous for the Leh Palace and the Namgyal Tsemo Gompa monastery. The glacier of Siachen, about 72km in length on Karakoram range of Himalayas is situated in this region.The Ladakh region comprises of the following ranges: Zanskar Range, the Ladakh Range, The Karakoram Range,The Aksai Chin Region and Gilgit &Batlistan.

Q Choose the right answer from the four alternatives given below:-

i) The outer plains of the Union Territory of Jammu & Kashmir are locally called as

a. Wuddars

b. Pahars

c. Khads

d. Andarwah and Bajwat

Ans: Andarwah and Bajwat

(ii) Saffron is cultivated in the

a. Middle Mountains

b. Karewas of Kashmir

c. Outer Plains

d. Plateau of Ladakh

Ans. Karewas of Kashmir

(iii) Karewas is formed of which kind of deposits

a. Lacustrine

b. Calcareous

c. Argillaceous

d. Fluvial

Ans. Lacustrine

2- PHYSICAL FEATURES OF INDIA

Q 1: Choose the right answer from the four alternatives given below.

(i) A landmass bound by sea on three sides is referred to as

Ans. (c) Peninsula

(ii) Mountain ranges in the eastern part of India forming its boundary with Myanmar are collectively called as

Ans. (c) Purvachal

(iii) The western coastal strip, south of Goa is referred to as

Ans. (c) Kannad

(iv) The highest peak in the Eastern Ghats is

Ans. (c) Mahendragiri

Q 2 : Answer the following questions briefly.(ii)

(i) What is the *bhabar*?

Ans. The *bhabhar* is that part of the Northern Plains where the rivers, after descending from the mountains, deposit pebbles. It is a narrow belt, having a width of about 8 to 16 km and lying parallel to the slopes of the Shiwaliks.

(ii) Name the three major divisions of the Himalayas from north to south.

Ans. The three major divisions of the Himalayas from north to south are the Great Himalayas/Inner Himalayas/Himadri (Northernmost division), the Lesser Himalayas/Himachal and the Shiwaliks (Southernmost division).

(iii) Which plateau lies between the Aravali and the Vindhyan ranges?

Ans. Malwa plateau lies between the Aravali and the Vindhyan ranges.

(iv) Name the island group of India having coral origin.

Ans. Lakshadweep Islands are composed of small coral islands.

Q 3: **Distinguish between:**

(i) ***Bhangar* and *Khadar*:** ***Bhangar*** *is the terrace-like feature present above the flood plains of the rivers. It is composed of older alluvium. It is the largest part of the Northern Plain. The soil of this region contains calcerous deposits locally known as kankar.*

*The newer, younger deposits of the flood plains are called **khadar**. This region is very fertile as it gets renewed almost every year. Hence, it is ideal for intensive agriculture.*

(ii) Western Ghats and Eastern Ghats

Western Ghats	Eastern Ghats
Mark the western edge of the Deccan Plateau	Mark the eastern edge of the Deccan Plateau
Continuous	Discontinuous and irregular
Higher; average elevation is 900–1600 metres	Lower; average elevation is 600 metres
Lie parallel to the western coast along the Arabian Sea	Lie parallel to the eastern coast along the Bay of Bengal

Q4:Which are the major physiographic divisions of India? Contrast the relief of the Himalayan region with that of the Peninsular plateau.

Ans.The major physiographic divisions of India are:

(i) The Himalayan Mountains
(ii) The Northern Plains
(iii) The Peninsular Plateau
(iv) The Indian Desert
(v) The Coastal Plains
(vi) The Islands

The Himalayan Region	The Peninsular Plateau
Having a comparatively recent origin, it is made up of young fold mountains	It is the oldest landmass of the Indian subcontinent; was part of the Gondwana land
Consists of the loftiest mountains and deep valleys	Consists of broad and shallow valleys, and rounded hills
Formed due to the collision of the	Formed due to the breaking and drifting

Indo-Australian and Eurasian plates	of the Gondwana land
Composed of sedimentary rocks	Composed of igneous and metamorphic rocks
From the point of view of geology, this region forms an unstable zone	This region forms a stable zone

Q5: Give an account of the Northern Plains of India.

Ans. The Himalayan upliftment out of the Tethys Sea and the subsidence of the northern flank of the Peninsular Plateau resulted in the formation of a large basin. Gradually, the rivers flowing from the mountains in the north and the peninsular plateau in the south filled up this depression with deposits of sediments. This led to the formation of the Northern Plains of India.

The formation of the Northern Plains owes largely to the interplay of three major river systems, namely – the Indus, the Ganga and the Brahmaputra along with their tributaries. This physiographic division spreads over an area of 7 lakh square kilometres, and is 2,400 kilometres long and 320 kilometres broad. It is a densely populated region. The rich soil cover, adequate water supply and favourable climate make the region agriculturally very productive.

The Northern Plains are broadly divided into three sections.

The Punjab Plains −Western part of the Northern Plains; formed by the Indus and its tributaries

The Ganga Plains − Largest part of the Northern Plains; extends between Ghaggar and Teesta rivers

The Brahmaputra Plains − Eastern part of the Northern Plains; formed by the Brahmaputra and its tributaries

According to the variations in relief features, the Northern Plains are divided into four regions.

Bhabar – Narrow belt of pebbles lying parallel to the slopes of Shiwaliks

Terai – Wet, swampy, marshy region south of the *bhabar* belt

Bhangar – Terrace-like feature composed of older alluvium, lying above the flood plains

Khadar – Newer, younger deposits of the flood plains

Q 6: Write short notes on the following.

(i) The Indian Desert **(ii) The Central Highlands**

(iii) The Island groups of India

(i) Lying towards the west of the Aravali Hills, the Indian Desert is an undulating sandy plain covered with crescent-shaped and longitudinal sand dunes. This region is characterised by very little rainfall, an arid climate and low vegetation cover. Streams appear only during the rainy season. Luni is the only large river in this region.

(ii) The part of the Peninsular Plateau lying to the north of the Narmada River, covering a major area of the Malwa Plateau, is known as the Central Highlands. They are **bound** by the Vindhya Range from the south and by the Aravali Hills from the northwest. The further westward extension merges with the Indian Desert while the eastward extension is marked by the Chotanagpur Plateau. The rivers draining this region flow from southwest to northeast. The Central Highlands are wider in the west but narrower in the east.

(iii) India has two groups of islands. The Lakshadweep Islands lie in the Arabian Sea, to the **southwest** of the mainland. The Andaman and Nicobar Islands lie in the Bay of Bengal, to the southeast of the mainland.

Lakshadweep is composed of small coral islands, covering a small area of 32 square kilometres. Kavaratti Island is its administrative headquarters. The Andaman and Nicobar Islands are bigger in size and are more numerous and scattered. The entire group of islands is divided into Andaman (in the north) and Nicobar (in the south).

Both these island groups are rich in flora and fauna, and are of great strategic importance to the country.

GEOGRAPHY

CHAPTER: POPULATION

TEXT BOOK QUESTIONS:

Q1. Choose the right answer from the four alternatives given below.

(i) Migrations change the number, distribution and composition of the population in

(a) The area of departure

(b) The area of arrival

(c) Both the area of departure and arrival

(d) None of the above

Ans: Both the area of arrival and departure.

(ii) A large proportion of children in a population is a result of

(a) High birth rates

(b) High life expectancies

(c) High death rates

(d) More married couples

Ans: High birth rates.

(iii) The magnitude of population growth refers to

(a) the total population of area

(b) the number of persons added each year

(c) the rate at which the population increases

(d) the number of females per thousand males

Ans: The total population of the area.

(iv) According to the Census, a “literate” person is one who

(a) can read and write his/her name

(b) can read and write any language

(c) is 7 years old and can read and write any language with understanding

(d) knows the 3 ‘R’s (reading, writing, arithmetic)

Ans: Is 7 years old and can read and write any language with understanding.

Q2. Answer the following questions briefly.

(i) Why is the rate of population growth in India declining since 1981?

Ans: The rate of population growing in India declining since 1981 due to government population policy, which focused on – birth control methods, importance of small family, gender equality and women empowerment schemes.

(ii) Discuss the major components of population growth?

Ans:There are three main components of population growth:

Birth Rate: is expressed in terms of number of live birth per thousand of population in a year.

Death Rate: expressed in terms of number of deaths occurring during a year per thousand of its population.

Migration: means movement of people across regions and territories, with change in permanent residence completely or for a substantial period of time. Migration can be internal or international.

(iii) Define age structure, death rate and birth rate?

Ans: Age structure: Age structure or Age composition of a population refers to the number of people in different age groups in a country.

Birth Rate: is the number of live births per thousand people in a year. It is major component of growth of population.

Death Rate: is the number of deaths per thousand people in a year.

(iv) How is migration a determinant factor of population change?

Ans: Migration is an important determinant of population change. It changes not only the population size but also the population composition of urban and rural populations in terms of age and sex composition. In India, the rural-urban migration has resulted in a steady increase in the percentage of population in cities and towns.

Q3. Distinguish between population growth and population change?

Ans: Population growth: Increase in the number of inhabitants of a region during a specific time period.

Birth rate and migration are the major causes of population growth.

Population change: During a specific time period, it is the change in the distribution, composition or size of the population.

Birth rate, migration, emigration are the major causes of population change.

Q4. What is the relation between occupational structure and development?

Ans: In under developing countries, a very high percentage of the population is involved in forestry, agriculture, and animal husbandry etc., also known as primary occupations.

On the other hand, in more developing countries, a high percentage of the population is involved in manufacturing.

Where in more developed countries, a major portion of the population is involved in professions like commerce, transport, banking etc., also known as tertiary occupations.

Q5. What are the advantages of having a healthy population?

Ans: People are the nation's most valuable resource. A well-educated healthy population provides potential power for creating an economically prosperous & developed nation.

It will make the nation strong in all spheres

It will help in economic growth.

The nation can compete globally with all other nations in any sphere of requirement.

Q6. What are the significant features of the National Population Policy 2000?

Ans: The government of India adopted the national population policy on 15th February 2000. The main features of the national population policy are as under.

a) Reduction of infant mortality rate below 30per 1000 live births.

b) Reduction of maternal mortality rate to below 100per 1,00,000 live births.

c) Universal immunization against diseases.

d) To achieve 80 percent deliveries in regular dispensaries, hospitals or through trained staff.

e) Facilities of safe abortions to be family norm.

f.) Strict enforcement of child marriage restraint act and pre- natal sex diagnostic act.

g) Incentive to adopt two – child small family norms

h) Access to information about AIDS and prevention and control of communicable diseases.

i) Raising the minimum age for marriage of girls to 18 years and preferably to 20 years or more.

j) A special reward for women who marries after 21 and opts for a terminal method of contraception after the second child.

k) Health insurance covers for those below the poverty line who undergo sterilization after having two children.

GEOGRAPHY

CHAPTER: NATURAL VEGETATION AND WILDLIFE

TEXTUAL ANSWER KEY

1)Choose the right answer from the four alternatives given below:

(i) To which one of the following types of vegetation does rubber belong to?

(a) Tundra (b) Himalayan (c) Tidal (d) Tropical Evergreen

Ans: Tropical Evergreen

(ii) Cinchona trees are found in the areas of rainfall more than

(a) 100 cm (b) 70 cm (c) 50 cm (d) less than 50 cm

Ans: 100 cm

(iii) In which of the following state is the Simli pal bio-reserve located?

(a) Punjab (b) Delhi (c) Odisha (d) West Bengal

Ans: Odisha

(iv) Which one of the following bio-reserves of India is not included in the world network of bio reserve?

(a) Manas (b) Gulf of Mannar (c) Nilgiri (d) Nanda Devi

Ans: Manas

2. Answer the following questions briefly.

(i) What factors are responsible for the distribution of plants and animals in India?

Ans: Climatic conditions: Temperature, Humidity, Photoperiod, Precipitation

Relief: Land, Soil

(ii) What is a bio-reserve? Give two examples.

Ans: Bio- reserve is a legally protected area where wildlife is protected and kept in their natural environment without imposing any restriction. This is done to protect the natural vegetation, wildlife, and the environment.

Examples: Sunderbans, Gulf of Mannar, Nanda Devi

(iii) Name two animals having habitat in the tropical and montane type of vegetation.

Ans: Following are some animals which are found in tropical forests and montane forests are:

a) Tropical forests: monkey, elephant, lion, pig etc.

b) Montane forests: Jack rabbit, snow leopard, Kashmir stag, wild sheep etc.

Q 3 Distinguish between

a)Flora and Fauna:

Flora	Fauna
It refers to natural vegetation growing in a particular area.	It refers to wildlife living in a particular area.
Flora consists of grass, plants, and creepers and free. Forests, bushes, shrubs and grassland make the flora cover on the earth.	The fauna are of three types those moving on earth those living in water (reptiles) and those flying in the air .

(ii) Tropical Evergreen and Deciduous forests

Tropical Evergreen	Deciduous forests
These grow in an area of annual rainfall more	These grow in an area receiving rainfall

than 200 cms.	between 200 cms and 70cms.
The trees in these forests shed their leaves at different time. Therefore, appear green all year around.	The trees of these forests shed their leaves about six to eight week in dry summer.
There are tall trees reaching heights of 60 mts. or even more	Here are found shorter trees about 20 mts height.
These forests are restricted to heavy rainfall areas of the Western Ghats and the island groups of Lakshadweep, Andaman and Nicobar, upper parts of Assam and Tamil Nadu coast.	These forests are found in the rainier parts of the Peninsular plateau and the plains of Bihar and Uttar Pradesh.

4. Name different types of vegetation found in India and describe the vegetation of high altitudes.

Ans:

1.Tropical evergreen forests

2.Tropical deciduous forests

3.Tropical Thorn forests and scrubs

4.Montane forests

5.Mangrove forests

At high altitude, generally, more than 3600 m above the sea level, temperate forests and grasslands give way to alpine vegetation. Silver fir, juniper birches and pines are the common trees found in these areas.

Q 5 Quite a few species of plants and animals are endangered in India. Why?

Ans: This is because of

- **a.** Relentless poaching and hunting of animals and cutting of trees.
- **b.** Pollution due to chemical and industrial waste
- **c.** Acid deposits
- **d.** Introduction of alien species.
- **e.** Clearing forests for inhabitation and agriculture owing to ever increase in population.

Q6 . Why has India a rich heritage of flora and fauna?

Ans: This is because it is because India has different types of soil and diverse relief features, different types of soil and variations in climatic conditions.The factors like temperature, sunlight, precipitation, all are suitable for the growth and development of both animals and plant kingdom in India. These fine factors are essential for the growth of bio-diversity. India has been listed among the twelve mega biodiversity countries of the world. Here are 47,000 plant species and 89,000 animal species. Besides these species, there are about 15,000 flowering plants in India.

TEXT BOOK QUESTIONS

Q 1. Choose the correct answer from the four alternatives given below.

(i) Which one of the following places receives the highest rainfall in the world?

(a) Silchar

(b) Mawsynram

(c) Cherrapunji

(d) Guwahati

Answer: Mawsynram

(ii) The wind blowing in the northern plains in summers is known as:

(a) Kaal Baisakhi

(b) Loo

(c) Trade Winds

(d) None of the above

Answer: Loo

(iii) Which one of the following causes rainfall during winters in the north-western part of India?

(a) Cyclonic depression

(b) Retreating monsoon

(c) Western disturbances

(d) Southwest monsoon

Answer: Western disturbances

(iv) Monsoon arrives in India approximately in:

(a) Early May

(b) Early July

(c) Early June

(d) Early August

Answer: Early June

(v) Which one of the following characterises the cold-weather season in India?

(a) Warm days and warm nights

(b) Warm days and cold nights

(c) Cool days and cold nights

(d) Cold days and warm nights

Answer: Cool days and cold nights.

Q2. Answer the following questions briefly.

(i) What are the controls affecting the climate of India?

Ans: Various factors influence the climate of India:

i. Latitude: The Tropic of cancer passes through the middle of country from the Rann of Kutchh in the west to Mizoram in the east. The areas lying in the south of the Tropic of cancer belong to the tropical area. Therefore, India's climate has characteristics of tropical as well as subtropical climates.

ii. Altitude: With the increase in altitude the atmosphere becomes less dense and temperature decreases. That is why hills care cooler during summer like Nanital, Darjeeling and Ooty and plains are hot during summer like Punjab, Haryana etc.

iii. Physiographic or Relief Features: Relief too plays a major role in determining the climate of a place. High mountains act as barriers for cold or hot winds. They may also cause precipitation if they are high enough and lie in the path of rain- bearing winds. The location of the Arabian sea, Indian Ocean and the Bay of Bengal on the three sides of India exert a moderating influence on the climate of India.

iv. Western Cyclonic Disturbances: The western cyclonic disturbances are weather phenomena of the winter months brought in by the westerly flow from the Mediterranean region. They usually influence the weather of the north and northwestern regions of India.

v. Pressure and winds: India lies in the region of northeasterly winds. These winds originate from the subtropical high- pressure belt of the northern hemisphere. The fury of monsoons as well as long dry spell in India is mainly due to the pressure conditions which develop in the surrounding countries like East Africa, Iran and Central Asia.

(ii) Why does India have a monsoon type of climate?

Ans: The word 'Monsoon' is derived from the Arabic word 'Mausim' which literally means season. Monsoon refers to the seasonal reversal in the wind direction during a year. The Monsoon winds are confined to the tropical area roughly between 20°N - 20°S latitudes. The peninsular

location in relation to large bodies of warm water is the main reason for this climate. Almost 90% rainfall in India is due to these monsoon winds.

(iii) Which part of India does experience the highest diurnal range of temperature and why?

Ans: The north-western part of India experiences the highest diurnal range of temperature. In the Thar desert, the day temperature may rise to 50°C because it is filled with sand which gets heated up quickly during day and cools down very quickly during nights.

(iv) Which winds account for rainfall along the Malabar Coast?

Ans: Southwest monsoon winds are responsible for rainfall along the Malabar Coast.

(v) What are Jet streams and how do they affect the climate of India?

Ans: Jet Streams are a narrow belt of high altitude (above 12,000 m) westerly winds in the troposphere. Their speed varies from about 110 km/h in summer to about 184 km/h in winter. A number of separate jet streams have been identified. The most constant is the mid-latitude and subtropical jet stream. They cause depressions during the monsoon season.

(vi) Define monsoons. What do you understand by "break" in monsoon?

Ans: The word 'Monsoon' is derived from the Arabic word 'Mausim' which literally means season. Monsoon refers to the seasonal reversal in the wind direction during a year. The Monsoon winds are confined to the tropical area roughly between 20°N - 20°S latitudes.

Breaks in monsoon are related to the movement of the monsoon trough. For various reasons, the trough and its axis keep on moving northward or southward, which determines the spatial distribution of rainfall. When the axis of the monsoon trough lies over the plains, rainfall is good in these parts. On the other hand, whenever the axis shifts closer to the Himalayas, there are longer dry spells in the plains and widespread rain occurs in the mountainous catchment areas of the Himalayan rivers.

(vii) Why is the monsoon considered a unifying bond?

Ans: The unifying influence of the monsoon on the Indian subcontinent is quite noticeable. The seasonal alteration of the wind systems and the associated weather conditions provide a rhythmic cycle of seasons. The uncertainties of rain and uneven distribution are very much typical of the monsoons. Year after year, people of India from north to south and from east to west, eagerly await the arrival of the monsoon. These monsoon winds bind the whole country by providing water to set the agricultural activities in motion. The entire agricultural calendar in India is governed by the monsoon. Most of the festivals in India are related to agricultural cycle. These festivals may be known by different names in different

parts of the country, but their celebration is decided by the monsoon. It is also said that the river valleys which carry the rainwater also unite as a single river valley unit. Due to these reasons, monsoon is often a great unifying factor in India.

Q3. Why does the rainfall decrease from the east to the west in Northern India?

Ans: The rainfall decreases from east to west in northern Indian because of the following reason:

The inflow of the south-west monsoon into India is such that the windward side of the western. Ghats receive very heavy rainfall, more than 250 cm. The vain shadow regions receives scanty rainfall and the moisture lader clouds shed the maximum rainfall of this season in the north-eastern parts of the country. Thus Mawsynram in the southern ranges of the khaki Hills receives the highest average rainfall in the world. Rajasthan and parts of Gujarat which are on the western get scanty rainfall.

Q.4 Give reason as to why:

(i) Seasonal reversal of wind direction takes place over the Indian subcontinent.

Ans: Monsoon blow from Northeast India towards the sea during winter (Nov to April) but with the beginning of summer, they begin to reverse their direction. During winter (Oct to Nov) with the apparent movement of sun towards the south, the low pressure through over the Northern

plains becomes weaker which causes the monsoon wind to blow from Northeast to south during this period.

(ii) The bulk of rainfall in India is concentrated over a few months.

Ans: The bulk of rainfall in India is concentrated over a few months stating from June to September. Because, during those four months, the rainbearing winds called the south-west monsoon, blow Northward in two streams from the Arabian Sea and Bay of Bengal. These winds blow from the oceanic high-pressure areas towards the low-pressure areas of land and make a heavy rainfall.

(iii) The Tamil Nadu coast receives winter rainfall.

Ans: In winter these is high pressure on the Indian mainland while thepressure over the Indian ocean remains low then, so, winds start blowing from Indian mainland towards the sea in winter. When these dry winds cross over the Bay of Bengal, they pick up moisture and when they strike against the Eastern Ghats, they cause heavy rain on the Coast of India.

(iv) The Delta region of the eastern coast in frequently struck by cyclones.

Ans: In India a gradual climatic transition from hot rainy season to dry winter season takes place during the months of October and November, the temperature start falling rapidly especially in North India and the low pressure conditions starts shifting towards the Bay of Bengal by November. This shift cause cyclonic depression in Andaman Sea, so they often become destructive and eastern coastal area like Godavari, the Krishna, and the Kaveri are frequently struck by these cyclones.

(v) Parts of Rajasthan, Gujarat and the leeward side of the Western Ghats are drought prone.

Ans: There is often low rain in Rajasthan (Thar Desert) and Gujarat because there is no relief or obstruction here to check the monsoons coming from the Arabian Sea. The Aravalli Hills to parallel to the direction of the monsoons as such the monsoons bypass Rajasthan and Gujarat unobstructed and 50, without giving any rain. The temperature of the Thar Desert or western Rajasthan is so high that the monsoon winds that pass over this region get dried and unable to cause any rain. There is often low rainfall in the leeward side of Western Ghats because that area comes under the rain shadow area.

Q 5. Describe the regional variations in the climatic conditions of India with the help of suitable examples?

Ans: The cold weather season begins from mid-November in northern India and stays till February. December and January are the coldest months in the northern part of India. The temperature decreases from south to north. The average temperature of Chennai, on the eastern coast, is between 24° – 25° Celsius, while in the northern plains, it ranges between 10°C and 15° Celsius. Days are warm and nights are cold. Frost is common in the north and the higher slopes of the Himalayas experience snowfall

In March, the highest temperature is about 38° Celsius, recorded on the Deccan plateau. In April, temperatures in Gujarat and Madhya Pradesh are around 42° Celsius. In May, the temperature of 45° Celsius is

common in the northwestern parts of the country. In peninsular India, temperatures remain lower due to the moderating influence of the oceans.

Q 6 Discuss the mechanism of the monsoon?

Ans: The following facts are important to understand the mechanism of the monsoons

The differential heating and cooling of land and water creates low pressure on the landmass of India while the seas around experience comparatively high pressure-

The Inter-Tropical Convergence Zone (ITCZ) in summer season shifts its position over the Ganga plain. This is the equatorial trough normally positioned about 5°N of the equator. It is also known as the 'monsoon trough' during the monsoon season.

The presence of the high-pressure area, East of Madagascar (approximately 20°S over the Indian Ocean). The intensity and position of this high-pressure area affect the Indian monsoon.

The Tibetan plateau gets intensely heated during summer, which results in strong vertical air currents and the formation of low pressure over the plateau at about 9 km above sea level.

The movement of the westerly jet stream to the North of the Himalayas and the presence of the tropical Easterly jet stream over the Indian peninsula during summer.

Q 7. Give an account of weather conditions and characteristics of the cold season?

Ans: The cold weather season begins from mid-November in northern India and stays till February. December and January are the coldest months in the northern part of India. The temperature decreases as we go from the south to the north. The average temperature in Chennai, on the eastern coast, is between 24° – 25° Celsius. Whereas in the northern plains, it ranges between 10°C and 15° Celsius. Here, the days are warm and nights are cold. Frost is common in the north and the higher slopes of the Himalayas experience snowfall. During this season, the northeast trade winds prevail over the country. They blow from land to sea and hence, for the most part of the country, it is a dry season. Some amount of rainfall occurs on the Tamil Nadu coast from these winds as here they blow from sea to land. In the northern part of the country, a feeble high-pressure region develops, with light winds moving outwards from this area. Influenced by the relief, these winds blow through the Ganga valley from the west and the northwest. The weather is normally marked by clear sky, low temperatures and low humidity and feeble, variable winds. A characteristic feature of the cold weather season over the northern plains is the inflow of cyclonic disturbances from the west and the northwest. These low-pressure systems originate over the Mediterranean Sea and western Asia and move into India, along with the westerly flow. They cause the much-needed winter rains over the plains and snowfall in the mountains. Although the total amount of winter rainfall (locally known as 'Mahawat') is small, they are of immense importance for the cultivation of 'rabi' crops. The peninsular region does not have a well-defined cold season. There is hardly any noticeable

seasonal change in temperature pattern during winters due to the moderating influence of the sea.

Q8. Give the characteristics and effects of monsoon rainfall in India?

Ans: Following the characteristics and effects of the Monsoons or Monsoon Rainfall:

a. The monsoons accounts for 90% of the rainfall received by India.

b. The rainfall is neither continuous nor regular.

c. Over all rainfall is not same each year.

d. The monsoon rains are not evenly distributed.

e. The heavy rains in the hills because of low pressure near Himalayas cause floods in the plains

f. Uneven distribution of rainfall creates a number of problems like it cause floods and havoc all around. On the other hand, insufficient rain in year to year results in droughts, famine, Food-s insecurity, starvation and even death.